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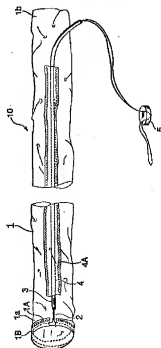
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(54) 【発明の名称】 汚染防止用カバー、汚染防止キット、汚染防止用カテーテル・キットおよび胃腸造影用カテーテル

(57) 【要約】

【目的】 開口端の締付けとその開放とが容易な汚染防止カバーを提供する。

【構成】 汚染防止用カバー10は一端が開口した細長い筒状袋体1を含む。筒状袋体1の開口端縁のほぼ全周にわたって閉鎖用糸2が縫い込まれている。閉鎖用糸2は互いに近接した箇所での縫い込み部から離れ、一端が縫い込み部の近くに配置された締付け用チューブ3内をゆるく通って締付け用チューブ3の他端から外部に導かれている。締付け用チューブ3から外部に導かれている閉鎖用糸2を引っ張り、かつ締付け用チューブ3をその上記一端が縫い込み部に強く接するまで押せば、縫い込み部に通っている閉鎖用糸2によって筒状袋体1の開口が締め付けられ、開口は閉じる。緊張している閉鎖用糸2を緩めれば、筒状袋体1の開口は自然に（筒状袋体1の弾性によって）開く、または開き得る状態となる。



PATENT ABSTRACTS OF JAPAN

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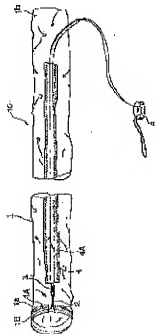
(54) POLLUTION PREVENTIVE COVER, POLLUTION PREVENTIVE KIT, POLLUTION PREVENTIVE CATHETER KIT AND CATHETER FOR GASTROSTOMY

(57)Abstract:

PROBLEM TO BE SOLVED: To provide a pollution preventive cover easy to clamp and release an opening end.

SOLUTION: The pollution preventive cover 10 comprises a slender cylindrical bag 1 opened at one end. An opening edge of the bag is sewed by a closure yarn 2 over its substantially entire periphery.

The yarn 2 is separated from its sewed part at positions approaching to each other, loosely passed at its one end through a clamping tube 3 disposed near the sewed part and introduced from the other end of the tube 3 to an exterior. When the yarn 2 introduced externally from the tube 3 is pulled and the tube 3 is pressed until its one end is strongly contacted with the sewed part, the opening of the bag 1 is clamped by the yarn 2 passed to the sewed part, and the opening is closed. When the tensioned yarn 2 is loosened, the opening of the bag 1 is naturally opened (by an elasticity of the bag 1) or set to an openable state.



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CLAIMS

[Claim(s)]

[Claim 1]A long and slender tubed bag body in which an end carried out the opening at least. Thread for closing is mostly sewn in over the perimeter, and thread for closing separates from that tuck part in a part of an open end edge of an implication and this tubed bag body which approached mutually, and are led outside from the other end of a tube for bolting loosely through inside of a tube for bolting with which one end has been arranged near the tuck part. Covering for pollution controls.

[Claim 2]The covering for pollution controls according to claim 1 which a tube for bolting is extended in the length direction along with a tubed bag body, and is covered with covering of a tube for bolting provided in a tubed bag body except for the above-mentioned other end at least.

[Claim 3]The covering for pollution controls according to claim 1 or 2 which one thread for closing is turned up on the open end edge of a tubed bag body, becomes two, and passes along inside of a tube for bolting.

[Claim 4]The covering for pollution controls according to claim 1 or 2 which one thread for closing is turned up on the open end edge of a tubed bag body, one end is fixed to the one above-mentioned end of a tube for bolting, and a portion which follows the other end passes along inside of a tube for bolting.

[Claim 5]The covering for pollution controls according to claim 1 or 2 which one thread for closing is turned up on the open end edge of a tubed bag body, one end is fixed to a ring, and a portion which follows the other end passes along inside of this ring, and passes along inside of a tube for bolting further.

[Claim 6]A long and slender tubed bag body in which an end carried out the opening at least, and thread for closing of an open end edge of this tubed bag body mostly sewn in over the perimeter, A pollution-control kit provided with a tube for bolting with which thread for closing is running along the inside loosely, and locking for holding eyelid completely closure of an open end edge of a tubed bag body by thread for closing.

[Claim 7]The pollution-control kit according to claim 6 which is the elastic body which thread for closing with which locking was led outside from a tube for bolting is running along.

[Claim 8]The pollution-control kit according to claim 6 or 7 with which a tube for bolting is extended in the length direction along with a tubed bag body, an end of a tube for bolting is near the above-mentioned open end edge, and a tube for bolting is covered with the covering provided in a tubed bag body except for the other end at least.

[Claim 9]The pollution-control kit according to any one of claims 6 to 8 which one thread for closing is turned up on the open end edge of a tubed bag body, becomes two, and passes along inside of a tube for bolting.

[Claim 10]A catheter for gastrostomies, and a long and slender tubed bag body by which a catheter for gastrostomies was inserted in an inside and in which an end carried out the opening at least, A catheter kit for pollution controls provided with a tube for bolting with which thread for closing mostly sewn in over the perimeter and thread for closing of an open end edge of this tubed bag body are running along that inside loosely, and locking for holding eyelid completely closure of an open end edge of a tubed bag body by thread for closing.

[Claim 11]The catheter kit for pollution controls according to claim 10 with which a tube for bolting is extended in the length direction along with a tubed bag body, an end of a tube for bolting is near the above-mentioned open end edge, and a tube for bolting is covered with the covering provided in a tubed bag body except for the other end at least.

[Claim 12]The catheter kit for pollution controls according to claim 10 or 11 which one thread for closing is turned up on the open end edge of a tubed bag body, becomes two, and passes along inside of a tube for bolting.

[Claim 13]The catheter kit for pollution controls according to any one of claims 10 to 12 which is the elastic body which thread for closing with which locking was led outside from a tube for bolting is running along.

[Claim 14]Rather than a path of the above-mentioned hole, in a catheter with which a tip part was formed in conical shape, a conical shape tip part is hollow, a hole is made at a tip, this hole is a size along which a head for slip off stops formed at a tip of a guide wire passes, and its path inside hollow of a conical shape tip part is large, and inside in the air. A catheter for gastrostomies which allows passage of a head of a guide wire inserted from the above-mentioned hole and with which a locking piece which prevents drawing is provided.

[Claim 15]The above-mentioned locking piece receives an inside of hollow of the above-mentioned conical shape tip part in shaft orientations of a conical shape tip part. It is provided aslant, the 1st slot wider than a head of a guide wire for passage is formed in an end which goes to the path of insertion of the above-mentioned guide wire of the above-mentioned locking piece, and this 1st wide slot is followed. The catheter for gastrostomies according to claim 14 with which the 2nd slot for slip off stop prevention where width is narrower than a head is formed.

[Claim 16]The catheter for gastrostomies according to claim 14 or 15 which has coupling frame which follows a base of the above-mentioned conical shape tip part, and the dome provided in an end of coupling frame.

[Claim 17]The catheter for gastrostomies according to claim 16 whose coupling frame is a tube.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention]This invention relates to covering for pollution controls used by a gastrostomy, a pollution-control kit, the catheter kit for pollution controls, and the catheter for gastrostomies.

[0002]

[Background] To a poor ingestion or an impossible patient, enteral feeding administration. The endermic endoscopic gastrostomy (Percutaneous Endoscopic Gastrostomy:PEG) (henceforth PEG) made possible. The local anesthesia is enough as anesthesia, operation time is also as short as 5 minutes - 10 minutes, and the recovery after an operation is possible also for outpatient surgery to the comparatively good patient of a general state early. For this reason, globally explosive spread is shown. For example, in the U.S., 180,000 affairs per year are enforced in 1997, and it is expected that the number will increase globally from now on.

[0003]Although three methods, the pull (pull) method, the push (push) method, and the introducer (introducer) method, are generally known by PEG, many pull methods or pushing methods are adopted as it from a viewpoint of the simple nature of the technique, and safety. However, the pull method and the pushing method have the following two faults. ** An endoscope must be inserted twice, there is a problem which gives the complicatedness of operation and a patient's pain, and there is a danger of damaging the pharynx, the pharynx, and an esophagus. ** Since contamination of the catheter for gastrostomies (dome provided in the tube for gastrostomies (PEG) and its part) is carried out in the mouth, the pharynx, and the pharynx, it is easy to generate wound part infection.

[0004]** A fault is fully conquerable by the device of anesthesia (SENDESHON), or progress of an endoscopist's skill. However, the wound part infection which makes a cause the PEG tube of ** and contamination of a dome is generated in high probability. It is reported by European and American literature that wound part infection was accepted with the probability of 35 to 45%. If wound part infection occurs, an antibiotic will have to be prescribed for the patient over a long period of time, the start of administration of enteral feeding will need to be overdue, immune activity will need to decline, and it will be necessary to extend duration of hospitalization. A patient's pain is large and a health care cost also increases. Not only a patient but the family's economic burden and mental anguish are large. Although it is possible to reduce the bacteria which adhere to a PEG tube and a dome by putting into practice the toilet in the mouth, and pharynx disinfection before an operation and prophylactic antibiotic administration, they are not fundamental ways of coping.

[0005]

[Description of the Invention]An object of this invention is to provide covering for pollution controls for preventing wound part infection beforehand in gastrostomy.

[0006]This invention aims at offer of the pollution-control kit for preventing wound part infection beforehand in gastrostomy.

[0007]Furthermore, this invention aims at offer of the catheter kit for pollution controls for preventing wound part infection beforehand in gastrostomy.

[0008]Furthermore, an object of this invention is to provide the catheter for gastrostomies excellent in the operativity used for a gastrostomy.

[0009]Covering for pollution controls by this invention, The long and slender tubed bag body in which the

end carried out the opening at least. Thread for closing is mostly sewn in over the perimeter, thread for closing separates from that tuck part in the part of the open end edge of an impaction and this tubed bag body which approached mutually, and one end is drawn outside from the other end of the tube for bolting loosely through the inside of the tube for bolting arranged near the tuck part.

[0010]In the mode by which thread for closing is sewn in on the open end edge of a tubed bag body. The open end edge of a tubed bag body is turned up by the inside or the outside, and the tip part by welding etc. By being fixed to a tubed bag body, a through bag is formed and that by which thread for closing passes along the inside of this through bag, the thing which thread for closing comes and goes between the inside of the open end edge of a tubed bag body and the outside at a suitable interval, and is sewn in, etc. are contained.

[0011]As for thread for closing, one thread for closing is turned up on the open end edge of a tubed bag body (forming the loop along an open end edge), It is what becomes two and is drawn outside through the inside of the tube for bolting. it may be — carry out, one thread for closing is turned up on the open end edge of a tubed bag body, and one end binds tight — business — the portion which is fixed to the one above-mentioned end of a tube, and follows the other end binds tight — business — it being led outside through the inside of a tube, and the portion which may exist and which it carries out, one thread for closing is turned up on the open end edge of a tubed bag body, and one end is fixed to a ring, and follows the other end passes along the inside of this ring, and binds tight further — business — it may be led outside through the inside of a tube.

[0012]As for the tube for bolting, being provided along with a tubed bag body is preferred. It may meet inside the tubed bag body, or may meet outside, the tube for bolting which provided covering in the tubed bag body and was extended in that length direction along with the tubed bag body — the — except for the above-mentioned other end, it is good as for a method of a wrap by this covering at least. The both sides stick, weld or paste up covering on a tubed bag body, and the bag body in which the tube for bolting is inserted by covering and the tubed bag body is formed. Covering itself may be saccate.

[0013]A tubed bag body is longer than the length from a patient's stomach to a mouth, and has the length which can cover all of the catheters for gastrostomies. The tube for bolting may be shorter than the length of a tubed bag body. There should just be length from a patient's stomach to a mouth at least.

[0014]Vinyl, rubber, etc. are preferably thin into the material of covering for pollution controls (tubed bag body), and a strong flexible thing with airtightness and watertightness is used for it. As a long and slender tubed bag body is put and the catheter for gastrostomies is inserted in a tubed bag body, the catheter for gastrostomies can be covered with covering for pollution controls. Tubed means becoming a cartridge, when it swells, and since a bag body is thin, it is not a cartridge in a normal state in many cases. A tubed bag body is the same meaning as a long and slender bag.

[0015]Silk, hemp, cotton, polyester, polyethylene, other vegetable fiber raw materials or a chemical fiber raw material, a metal material, etc. are used for the material of thread for closing.

[0016]Covering for pollution controls by this invention is used as follows in gastrostomy.

[0017]In gastrostomy, a guide wire is inserted into the stomach through the outer case by which the puncture was carried out by penetrating a patient's abdominal wall and stomach walls. A guide wire is pulled out outside from the mouth through an esophagus. The end (conical shape tip part) of the catheter for gastrostomies is connected with the guide wire pulled out outside. The catheter for gastrostomies is sent in in the stomach from a patient's mouth by what a guide wire pulls (the pull method) or is pushed in (the pushing method).

[0018]Before sending in the catheter for gastrostomies in the stomach from a patient's mouth, an end carries out the opening of the whole catheter for gastrostomies at least, and it covers with covering for pollution controls with a long and slender tubed bag body, and the opening of the above-mentioned tubed bag body is closed in near the connecting part of the catheter for gastrostomies, and a guide wire. The catheter for gastrostomies may be inserted in a tubed bag body by a manufacturing stage, and the catheter for gastrostomies may be inserted during an operation in a tubed bag body.

[0019]Where the catheter for gastrostomies is covered with covering for pollution controls, from the mouth, it sends in in the stomach and the opening of the above-mentioned tubed bag body is opened in the stomach. The catheter for gastrostomies is drawn out outside of the body with the outer case through the hole of an abdominal wall and stomach walls, pulling out the catheter for gastrostomies from the opening

which the tubed bag body opened. Covering for pollution controls is taken out from the mouth outside of the body after that. The end piece of the catheter for gastrostomies is detained in the stomach (it contains, also when separating an end piece from a catheter).

[0020]According to this invention, the catheter for gastrostomies (and structure of the catheter for gastrostomies, connecting part of the catheter for gastrostomies and a guide wire) is sent in towards the stomach from the mouth in the state where it was covered and covered with covering for pollution controls with a tubed bag body outside the mouth. Since the opening of covering for pollution controls is closed until it reaches the stomach, the catheter for gastrostomies does not touch a patient's mouth, the pharynx, and the pharynx directly. The catheter for gastrostomies is kept clean.

[0021]It is opened within a patient's stomach, the catheter for gastrostomies is pulled out from the opening of covering for pollution controls in the stomach, and the opening of covering for pollution controls is pulled out by the outside of the body through the hole (wound part) which penetrates an abdominal wall and stomach walls. Since the catheter for gastrostomies is sent in the stomach while it had been kept clean, it is not polluted by bacteria. Even if the clean catheter for gastrostomies contacts the hole (wound part) which penetrates an abdominal wall and stomach walls, a hole (wound part) is hardly polluted by bacteria. Wound part infection can be prevented effectively.

[0022]According to this invention — the open end edge of a tubed bag body — thread for closing being beforehand sewn in mostly by the perimeter, and binding this thread for closing tight from one end of the tube for bolting — business — it passes along the inside of a tube and is led outside from the other end. If it pushes until it pulls the thread for closing led outside from the other end of the tube for bolting and the one above-mentioned end touches the tube for bolting in a tuck part strongly, with the thread for closing along which it passes in the tuck part, the opening of a tubed bag body will be bound tight and an opening will be closed. If it holds by locking which mentions thread for closing later in the state where it was become tense, for example, the opening of a tubed bag body will be maintained at the state where it closed. If tense thread for closing is loosened, for example locking will be removed, the opening of a tubed bag body will be in the state where it opens automatically (elasticity of a tubed bag body), or can open. Also when opening the opening closed also when closing the opening of a tubed bag body, a hand's dexterity is seldom needed. A gastrostomy can be made to finish for a short time.

[0023]The long and slender tubed bag body to which the end carried out the opening of the pollution-control kit by this invention at least, It has the tube for bolting with which the thread for closing mostly sewn in over the perimeter and thread for closing of the open end edge of this tubed bag body are running along that inside loosely, and locking for holding the eyelid completely closure of the open end edge of the tubed bag body by thread for closing. This pollution-control kit is provided as combination of an above-mentioned tubed bag body, thread for closing, the tube for bolting, and locking. Therefore, what is necessary is just to insert the catheter for gastrostomies in a tubed bag body, if this pollution-control kit is put on the catheter for gastrostomies in front of enforcement of gastrostomy, or during an operation.

[0024]The tube for bolting is preferably provided in the state where it was covered with covering (in the state where it was put in between covering and a tubed bag body).

[0025]Prevention of wound part infection can be aimed at by using this pollution-control kit for gastrostomy as mentioned above. It can also perform also closing the opening of a tubed bag body, and opening easily by whether thread for closing is pulled to the tube for bolting, or stress is loosened.

[0026]It is the elastic body along which the thread for closing led outside from the tube for bolting passes by one embodiment in locking. If it has locking in the position of the other end of the tube for bolting when thread for closing is pulled, in order to close the opening of a tubed bag body, thread for closing will not move according to the frictional force of thread for closing, and an elastic body, and will be held at the state where it was become tense. The member in which the end eye (crack) which puts thread for closing was formed, a clip, etc. can also be used for locking.

[0027]This invention provides the catheter kit for pollution controls containing above-mentioned covering for pollution controls or pollution-control kit. The long and slender tubed bag body to which the catheter for gastrostomies and the catheter for gastrostomies were inserted in the inside, and the end carried out the opening of this catheter kit for pollution controls at least, It has the tube for bolting with which the thread for closing mostly sewn in over the perimeter and thread for closing of the open end edge of this tubed bag body are running along that inside loosely, and locking for holding the eyelid completely closure

of the open end edge of the tubed bag body by thread for closing.

[0028] Since the catheter for gastrostomies is already covered with the tubed bag body, the time and effort which puts a tubed bag body on the catheter for gastrostomies can be saved. A gastrostomy can be terminated in still shorter time. With thread for closing, and the tube for bolting, the opening of a tubed bag body can be closed and the opening closed in the stomach can be opened.

[0029] This invention provides the catheter for gastrostomies further. The tip part of the catheter for gastrostomies by this invention is the catheter formed in conical shape, a conical shape tip part is hollow, a hole is made at a tip and this hole is a size along which the head for slip off stops formed at the tip of a guide wire passes. The path inside the hollow of a conical shape tip part is larger than the path of the above-mentioned hole, passage of the head of the guide wire inserted in the inside of in the air from the above-mentioned hole is allowed, and the locking piece which prevents drawing is provided.

[0030] Neither the section inside the hollow of a conical shape tip part nor the hole at a tip is restricted circularly. When the section inside in the air is the shape of a rectangle and others as the path inside in the air is larger than the path of a hole, it becomes the meaning that one side or diagonal line of the section inside in the air is larger than the path of a hole, its one side, or a diagonal line.

[0031] In the gastrostomy mentioned above when the catheter for gastrostomies by this invention was used, What is necessary is just to put the tip of a guide wire into the hole of the conical shape tip part of the catheter for gastrostomies, when connecting with the end of the catheter for gastrostomies the guide wire pulled out outside from the mouth through an esophagus. The head for slip off stops at the tip of a guide wire goes into the inside of the hollow of a conical shape tip part from the hole at a tip, and the drawing is prevented with a locking piece. A guide wire is connected with the conical shape tip part of the catheter for gastrostomies by this. Therefore, connection of a guide wire and the catheter for gastrostomies is simple, and shortening of the time of a gastrostomy is attained.

[0032] In one embodiment, the above-mentioned locking piece receives the inside of the hollow of the above-mentioned conical shape tip part in the shaft orientations of a conical shape tip part. It is provided aslant, the 1st slot wider than the head of a guide wire for passage is formed in the end which goes to the path of insertion of the above-mentioned guide wire of the above-mentioned locking piece, and the 2nd slot for slip off stop prevention where width is narrower than a head is formed succeeding this 1st wide slot.

[0033] The 1st slot for passage where the width formed in the locking piece provided in the hollow interior of the conical shape tip part of the catheter for gastrostomies is wide, Since passage of the head for slip off stops formed at the tip of a guide wire is allowed, if a guide wire is inserted in the hollow in a conical shape tip part from the hole at the tip of a conical shape tip part, he will follow the head of the inserted guide wire through the 1st slot of the above-mentioned locking piece (a locking piece is separated and it is on the other side). The main part (portion except a head) of a guide wire enters the 2nd slot for slip off stops where the width formed succeeding the 1st wide slot is narrow. Since the width of the 2nd slot is narrower than the head at the tip of a guide wire, even if it pulls a guide wire, a head does not escape from a locking piece. Since a guide wire and the catheter for gastrostomies can be connected easily, construction of the gastric fistula can be finished further in a short time.

[0034]

[Example] Drawing 1 shows covering for pollution controls used in endermic endoscopic gastrostomy (Percutaneous Endoscopic Gastrostomy: henceforth the PEG method). Drawing 2 expands and shows the end of covering for pollution controls.

[0035] Including the long and slender tubed bag body (sheath: sheath) 1, even if the covering 10 for pollution controls has few these tubed bag bodys 1, the end 1a is carrying out the opening of it. The hole may be made, even if it has closed the other end 1b of the tubed bag body 1 and is carrying out the opening. The length of the tubed bag body 1 is longer than the length of the catheter 12 for gastrostomies (henceforth a PEG catheter) mentioned later, and the path is comparable as the path of the dome 13 provided in the end piece of the PEG catheter 12, and large. When the tubed bag body 1 is made from material with elasticity, the path may be slightly smaller than the path of the dome 13. Anyway, the PEG catheters 12 including the dome 13 should just pass along the inside of the tubed bag body 1. It is preferred to apply jelly and other lubricant to the inner surface of the tubed bag body 1.

[0036] The tubed bag body 1 of vinyl and rubber, etc. is thin, and is built with a strong flexible material with airtightness and watertightness. Preferably, the tubed bag body 1 is thin as much as possible, and has

elasticity (especially hoop direction). In drawing 1, in order to make it intelligible, the tubed bag body 1 is illustrated in the form which swelled cylindrical, but since the tubed bag body 1 is thin, it has not swollen to a cartridge by a normal state. Anyway, the inside of the tubed bag body 1 is a long and slender bag in the air.

[0037]As for the edge part of the end 1a in which the tubed bag body 1 carried out the opening, that bag or passage where the perimeter is covered mostly, the open end edge 1B of the tubed bag body 1 is turned up outside, and that end is welded by the bag body 1 (or adhesion) (the numerals 1A show this fixed section), and meets the edge of an opening is formed. The open end edge 1B may be turned up inside. This bag or passage lets the thread 2 for closing pass. The both ends of the thread 2 for closing are drawn outside from the edge part of the tubed bag body 1 in the position which approached mutually.

[0038]Along with the longitudinal direction of the tubed bag body 1, the covering 4 is formed in the outside surface of the tubed bag body 1. The covering 4 of vinyl and rubber as well as the tubed bag body 1, etc. is thin, and is built with a strong flexible material with airtightness and watertightness. The both sides of the covering 4 are welded by the outside surface of the tubed bag body 1 (or adhesion) (the numerals 4A show this fixed section), and the bag or passage which meets the longitudinal direction of the tubed bag body 1 by this is formed. The covering 4 is formed to the position of mist or the other end 1b from the center of from near the opening of the one end 1a of the tubed bag body 1 up to near the other end 1b of the tubed bag body 1, or the tubed bag body 1. The length of the covering 4 should just have the length from a patient's stomach to near the mouth.

[0039]The bag or passage formed with the outside surface and the covering 4 of the tubed bag body 1 lets the long and slender tube 3 for bolting pass. The tube 3 for bolting is longer than the length of the longitudinal direction of the covering 4. Since the tube 3 for bolting is only running along the inside of the bag formed with the covering 4, or a passage, it can be made to move to the longitudinal direction of the tubed bag body 1 free. The thread 2 for closing led outside from the open end edge 1B of the tubed bag body 1 becomes two, passes along the inside of the tube 3 for bolting loosely from one end of this tube 3 for bolting, and is led outside from the other end of the tube 3 for bolting. The end of the tube 3 for bolting is located near the end 1a of the tubed bag body 1.

[0040]The tube 3 for bolting is built with a plastic and the existing material of other flexibility. In order to make it intelligible, the path is somewhat large and the tube 3 for bolting to illustrate is drawn. Anyway, the tube 3 for bolting is the long and slender pipe with which the hole was formed in the inside, and the path of a hole should just be a grade along which the thread 2 for closing passes loosely.

[0041]the both ends of the thread 2 for closing led outside from the tube 3 for bolting enter in the locking 5 from the whole surface — the locking 5 — on the other hand — **** — it enters in the locking 5 from other sides again, and is led outside from the whole surface of the locking 5. That is, the two thread 2 for closing is running along the locking 5 strongly twice.

[0042]The locking 5 has preferred elastic bodies, such as silicone rubber. By frictional force with an elastic body, the thread 2 for closing passing through the inside of an elastic body is held strongly at the state.

[0043]Silk thread is used as the thread 2 for closing. Thread and a metal wire made from the vegetable fiber or chemical fiber of the product made from hemp, the product made from cotton, the product made from polyester, the product made from polyethylene, and others may be used.

[0044]It clarifies, while explaining the PEG method with reference to drawing 13 from drawing 3 about the directions for use and the role of the covering 10 for pollution controls of composition of having mentioned above. The example explained here is called the pull (Pull) method. Generally the PEG method is enforced by a way person, an endoscopist, and 1-2 nurses.

[0045]From the mouth of the patient who put it to sleep to the supine position, the endoscope 24 is turned in the stomach and inserted. The supplied air of the air is carried out into a patient's stomach through the endoscope 24, the stomach is swollen, and stomach walls and the peritoneum are stuck. A site of puncture is determined and the circumference of a site of puncture is fully disinfected. After anesthetizing near a site of puncture locally, the skin of a site of puncture is cut open about 1 cm, and the needle 21 with an outer case is stabbed there (drawing 3).

[0046]The needle 21 with an outer case comprises the outer case 22 of a cylindrical shape, and the needle (container liner) 23 by which the tip was formed in the acute angle. The inside of the outer case 22 is hollow, and the needle 23 has projected the tip of the needle 23 for a while from the tip of the outer case

22 in the state where it was thoroughly dedicated in the outer case 22. Also in ***** and the outer case 22, the tip of the needle 23 formed in the acute angle penetrates an abdominal wall, the peritoneum, and stomach walls to an abdominal wall, the peritoneum, and stomach walls.

[0047]The needle 23 is sampled from the outer case 22. An abdominal wall to stomach walls keep the outer case 22 thrust. The tip of the snare forceps 25 is taken out from the tip of the endoscope 24 in the stomach (drawing 4).

[0048]The guide wire 11 is inserted into the stomach from outside through the outer case 22 (drawing 5).

[0049]The tip end part of the guide wire 11 sent in in the stomach is grasped with the snare forceps 25. The guide wire 11 grasped by the snare forceps 25 is pulled out outside from a patient's mouth with the endoscope 24. After pulling out the guide wire 11 of sufficient length besides the mouth, grasping by the snare forceps 25 is solved.

[0050]The PEG catheter 12 is thin [the tip part of this PEG tube 14] to conical shape including the PEG tube 14 (this portion is called taper part 16), and the dome 13 is formed in the end in one. The taper part 16 of the PEG catheter 12 and the guide wire 11 pulled out from the patient's mouth are connected (drawing 6). This connection is later mentioned with the structure of the taper part 16.

[0051]The PEG catheter 12 is put in in the tubed bag body 1 of the covering 10 for pollution controls from the dome 13 to the taper part 16, and the open end 1a of the tubed bag body 1 is closed using the thread 2 for closing (drawing 7). The PEG catheter 12 will be covered with the tubed bag body 1 including the taper part 16.

[0052]Drawing 13 expands and shows signs that the open end 1a of the tubed bag body 1 of the covering 10 for pollution controls was closed, with the thread 2 for closing.

[0053]The both ends of the thread 2 for closing drawn from the other end of the tube 3 for bolting outside are pulled, and one end of the tube 3 for bolting is turned to the open end of the tubed bag body 1, and is pushed. The loop which the thread 2 for closing builds becomes small by this, the open end 1a of the tubed bag body 1 is bound tight by the thread 2 for closing, and the end part of the tube 3 for bolting, and an opening closes (the open end of the closed tubed bag body 1 is hereafter called closed end). The thread 2 for closing passes in the closed end. Then, the thread 2 for closing is made to meet and the locking 5 is moved even to the position of the other end of the tube 3 for bolting. By the elasticity of the locking 5, and the frictional force of the locking 5 and the thread 2 for closing, even if it lifts a hand from the tube 3 for bolting, and the thread 2 for closing, the state which has closed the open end is held.

[0054]Drawing 19 (A) - (C) Other examples of locking are shown. Drawing 19 (A) Putting the thread 2 for closing between the end eye (crack) formed in the locking 5A so that it might be shown, or drawing 19 (B) (C) It may be made for the thread 2 for closing not to loosen by inserting the thread 2 for closing into the clips 5B and 5C so that it may be shown.

[0055]Next, the end of the guide wire 11 which has come out to the patient's outside of the body through the outer case 22 is pulled from outside. Thereby, the PEG catheter 12 connected with the guide wire 11 is drawn in the stomach through the mouth, the pharynx, the pharynx, and an esophagus in the state where it was covered with the tubed bag body 1 (drawing 8).

[0056]While drawing the PEG catheter 12 in the stomach, again, from the mouth, the endoscope 24 is turned in the stomach and inserted. By inserting the endoscope 24, as the PEG catheter 12 is made to meet, the endoscope 24 can be smoothly led into a patient's stomach.

[0057]If the guide wire 11 is pulled, the closed end of the tubed bag body 1 will hit at the tip of the outer case 22 (drawing 9). It is good to check through the endoscope 24 that the closed end of the tubed bag body 1 has hit at the tip of the outer case 22. In this state, the other end of the PEG catheter 12 and the tubed bag body 1 has still come out of a patient's mouth (refer to drawing 8). The closed end of the tubed bag body 1 may check at the feel of a hand that the tip of the outer case 22 has hit. Then, it may be made to insert the endoscope 24 in the stomach. Insertion of the 2nd endoscope is also omissible.

[0058]It is made to move so that the locking 5 may be moved in the direction of the end of the thread 2 for closing which separates from the other end of the tube 3 for bolting, i.e., the direction, and the tube 3 for bolting may be kept away from a closed end. Then, it will be in the state where the thread 2 for closing can loosen, and the open end of the tubed bag body 1 opens, or it can open (drawing 10).

[0059]It is good to attach to the open end 1a of the tubed bag body 1 beforehand the kink or fold of the direction opened outside. When the thread 2 for closing is able to loosen, the mouth of the tubed bag body

1 comes to open certainly.

[0060]The guide wire 11 is pulled out further outside, extracting the outer case 22 from stomach walls and an abdominal wall. The taper part 16 and the PEG tube 14 are pulled out by the outside of the body through the hole of stomach walls and an abdominal wall (drawing 11).

[0061]While pulling out the PEG catheter 12 to the patient's outside of the body, an endoscopist holds by hand the other end 1b of the tubed bag body 1 which has come from a patient's mouth outside, and it is made not to be drawn in a patient's inside of the body.

[0062]At last, the dome 13 appears in the stomach from the open end of the tubed bag body 1, and hits stomach walls (drawing 12). If necessary, it will check with the endoscope 24 that the dome 13 has hit stomach walls. The tubed bag body 1 is pulled out outside of the body from a patient's mouth.

[0063]The PEG tube 14 pulled out by the patient's outside of the body is cut by suitable length, and the adapter for nutrient pouring (graphic display abbreviation) is connected to the cut portion. The PEG tube 14 is fixed to a patient's body with a suitable fastener, and enforcement of the PEG method finishes.

[0064]The outside surface of the guide wire 11 which passed the pharynx, the pharynx, and the mouth, and the tubed bag body 1 is polluted with the bacteria adhering to the mouth, the pharynx, and the pharynx. However, since the guide wire 11 is pulled [be / it / under / of the outer case 22 / passing] out by a patient's outside of the body, the wound part (hole) of stomach walls and an abdominal wall is hardly polluted by bacteria by the guide wire 11. The taper part 16, the PEG tube 14, and the dome 13 pass the mouth, the pharynx, and the pharynx, where all are covered with the tubed bag body 1, they are sent in the stomach, and are pulled out from the tubed bag body 1 in the stomach. When the taper part 16 and the PEG tube 14 are pulled out by the outside of the body, even if it contacts a wound part, a possibility of being polluted by bacteria does not almost have a wound part, either. The tubed bag body 1 with which the outside surface is polluted with bacteria is taken out from a patient's mouth outside. A wound part is not polluted with the covering 10 for pollution controls. Thereby, wound part infection can be prevented beforehand.

[0065]Also in the pushing method, the contamination of a wound part can be effectively prevented by pushing in in the stomach, where the covering 10 for pollution controls is put on the PEG catheter 12.

[0066]Skill special about both closing of the open end using the thread 2 for closing and the tube 3 for bolting and the opening of a closed end is not needed. A gastrostomy can be made to finish for a short time comparatively.

[0067]the thread 2 for closing not necessarily binds the both ends (2) tight — business — it is not necessary to draw outside through the tube 3 As shown in drawing 17, one end of the thread 2 for closing may be fixed to the tube 3 for bolting by adhesion, welding, etc., and it may draw outside through the portion which follows the other end in the tube 3 for bolting. As shown in drawing 18, one end of the thread 2 for closing may be fixed to the ring 7 in which the hole was opened in the center by adhesion, welding, etc., and the portion which follows the other end may be loosely drawn [be / it / under / of through and also the tube 3 for bolting / letting it pass] outside in the central hole of the ring 7. Also in which mode shown in drawing 17 and drawing 18, the open end of the tubed bag body 1 can be bound tight easily, and it can close, or the thread 2 for closing and the tube 3 for bolting can open a closed end.

[0068]Drawing 14 shows some button type PEG catheters (tube for gastrostomies) called a step button. This step button 30 is attached to the end piece of the PEG tube of a PEG catheter, and when the cash drawer to the outside of the body out of the stomach is completed (it is equivalent to the state which shows in drawing 12), it is separated from a PEG tube. The dome 32 which this step button 30 is formed at the tip of the shaft 31 and the shaft 31 in one, builds in a check valve, and is left behind in the stomach. It is formed in one with the shaft 31, it connects with the locking 33 equivalent to the outside of an abdominal wall, and the locking 33, and comprises the cap 34 which closes the mouth of the shaft 31. The covering 10 for pollution controls mentioned above is applicable also to a button type PEG catheter with such a step button 30. It cannot be overemphasized that use of the covering 10 for pollution controls is possible also about the PEG catheter of other gestalten.

[0069]drawing 15 (A) - (C) And drawing 16 (A) - (C) **** — the situation of connection to a PEG catheter and a guide wire is shown in detail.

[0070]The spherical head 11a which has a larger path than the path of the section of the guide wire 11 is formed at the tip of the guide wire 11 pulled out outside from a patient's mouth. On the other hand, the

taper part 16 of the PEG catheter 12 is hollow (the numerals 16a show a building envelope), and the hole 16e of the path which is a grade along which the head 11a formed at the tip of the guide wire 11 passes is made at the tip. The guide wire 11 pulled out from the mouth is inserted in the inside 16a of the taper part 16 from the hole 16e at the tip of the taper part 16.

[0071]In near the boundary of the taper part 16 and the PEG tube 14, the plate (locking piece) 16b is aslant formed in the inside of the taper part 16 to the shaft orientations of the taper part 16 (fixed). The broad slot 16c of the size which can pass through the head 11a of the guide wire 11 is formed in 1 half portion (portion which goes in the direction of the PEG tube 14) of the plate 16b provided aslant. The width of the slot 16c is narrowed in near the center of the plate 16b, and 16 d of slots where width is narrow are formed succeeding the broad slot 16c in other half portions (portion which goes to the hole 16e of the taper part 16) (drawing 15 (A) and drawing 16 (A)).

[0072]If the guide wire 11 is inserted in the inside of the taper part 16 from the hole 16e at the tip of the taper part 16, the spherical head 11a formed at the tip of the guide wire 11 will pass through the broad slot 16c, and will follow the head 11a to the PEG tube 14 side exceeding the position of the plate 16b. The guide wire 11 enters in the slot 16d where width is narrow (drawing 15 (B) and drawing 16 (B)). Since the head 11a starts 16 d of slots where the width of the plate 16b is narrow even if it pulls the guide wire 11 in this state, the guide wire 11 does not escape from the taper part 16 (drawing 15 (C) and drawing 16 (C)). Thus, the PEG catheter 12 and the guide wire 11 of each other are connected.

[0073]The step 16f is formed in the end piece of the taper part 16, and the end of the PEG tube 14 fits into this step 16f, and is being fixed to it.

[Translation done.]